AFRC Acquisition Survival Course

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Disclaimer

Who is the Instructor?

- *MIKE UECKER*
  - *8 YEARS RADAR NAV (FB-111A AND B-52)*
  - *4 YEARS B-52 MODERNIZATION PROGRAM MANAGER (ASC)*
  - *4 YEARS SPACE SYSTEMS (Advanced Launch System and NASP) (SSC AND ASC)*
  - *4 YEARS TRAINING SYSTEMS PROGRAM MANAGER (ASC)*
  - *6 YEARS CONSULTING/SMALL BUSINESS OPERATIONS*
  - *2 YEARS AUTOMOTIVE PRODUCT ENGINEERING/ PRODUCT PLANNING*

Acquisition Fundamentals for AFRC Action Officers

"Need to know" information for all Reservists who deal with new acquisition or modification programs

Purpose

- *Provide each Reservist Action Officer with:*
  - *Insight into the acquisition environment*
    - *Roles of the players*
  - *The Role of the Requirements process in programs*
    - *The "Users" voice*
  - *Weapons System Life Cycle*
  - *Recent changes in policies and procedures*
  - *Pitfalls and protection*

Consistent with Reserve Component Employment 2005 Study.

Reserve Component Employment 2005 Study (RCE-05)

- *Looked at better ways to use National Guard and Reserve Forces, concluded*
  - *Should have expanded role in homeland defense*
    - *Provide infrastructure defense in event of WMD use CONUS*
    - *Expand counter drug role*
    - *National Missile Defense?*
  - *Could reduce active force ops tempo*
  - *Needs role clarification for major conflicts*

Bottom line: Any role expansion increases AFRC staff involvement in acquisition/sustainment.

Outline

- *Acquisition Environment and Process Overview* ⬅
- *Marketers, Business Development, and the Action Officer*
- *Requirements Generation Process*
- *Contracting*
- *Financial Management:*
  - *Cost Estimation*
  - *PPBS/Resource allocation*
  - *Program/Budget Execution*
- *Program Execution*
- *Production & Deployment*
- *System Upgrades/ Modifications*

The Acquisition Environment

- ***Cost, Schedule, and Performance (and Supportability)***
  - *Balancing the 3(4) legs of the stool*
- ***Management Framework (decision support systems)***
  - *Requirements Generation System*
  - *Acquisition Management System*
  - *Planning, Programming and Budgeting System*

Effective interaction essential for success

Acquisition Environment

- **Why Defense Acquisition is Unique**
  - *One buyer, many sellers*
  - *Not profit oriented (from DoD perspective)*
  - *Paid for with taxpayer funds*
  - *Price and quantities determined by Government*
  - *Lots of "checkers" (I.G., tests, lawyers, media, public, etc.)*
  - *Need is threat driven, not market driven*

DoD will not go out of business just for doing poorly. Only if we finish second in a major war!

The Challenge

- *Maintain a technically superior Air Force, ensure readiness for short notice deployment, and support a viable industrial base for future needs.*
  - *Given smaller acquisition corps, less oversight, 70% less money, constant reorganizations, shorter technology cycle times, and commercial market forces*

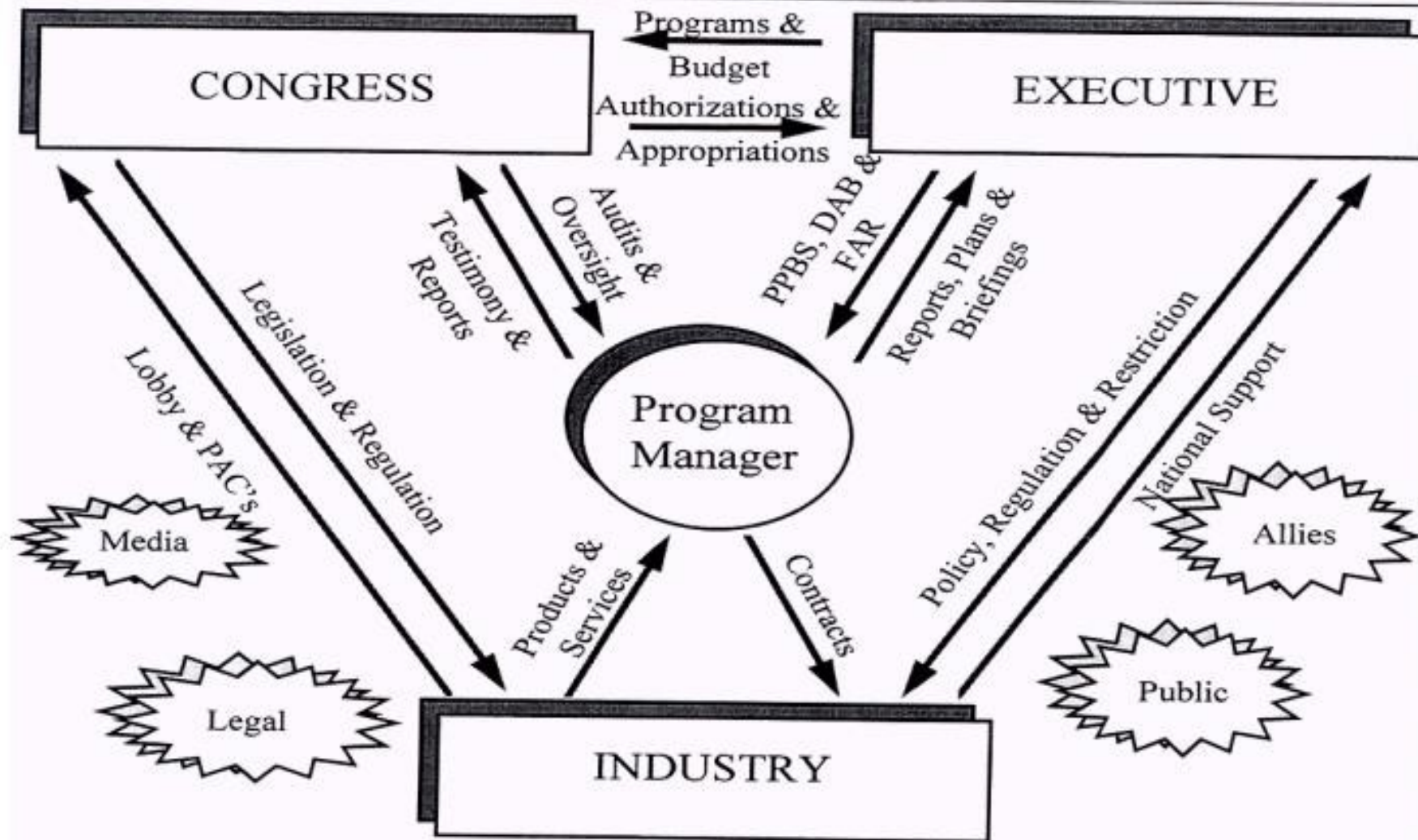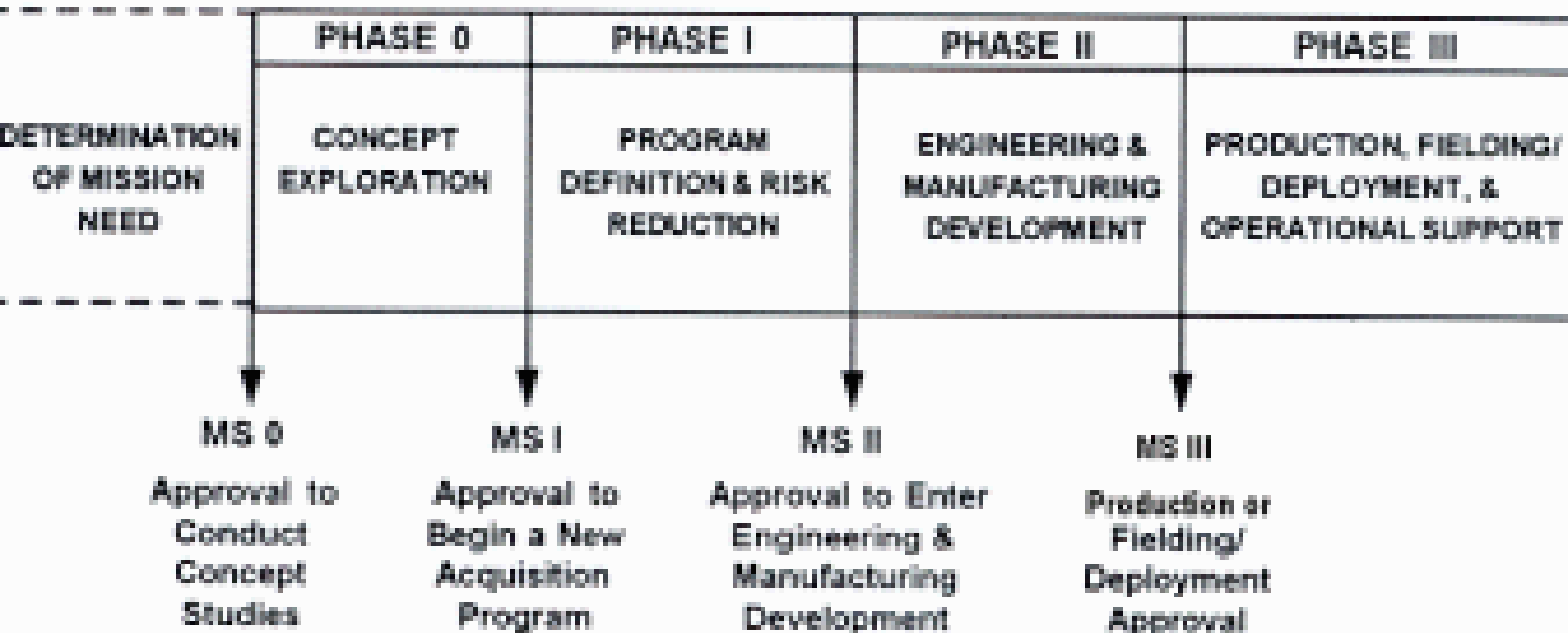*The Only Constant is Change.*

Interfaces and Relationships

Figure 1: "Tortured Triangle" of Defense Acquisition Programs

ACQUISITION MILESTONES & PHASES

	PHASE 0	PHASE I	PHASE II	PHASE III
DETERMINATION OF MISSION NEED	CONCEPT EXPLORATION	PROGRAM DEFINITION & RISK REDUCTION	ENGINEERING & MANUFACTURING DEVELOPMENT	PRODUCTION, FIELDING/ DEPLOYMENT, & OPERATIONAL SUPPORT

MS 0

Approval to Conduct Concept Studies

MS I

Approval to Begin a New Acquisition Program

MS II

Approval to Enter Engineering & Manufacturing Development

MS III

Production or Fielding/ Deployment Approval

The number of phases and decision points shall be tailored to meet specific needs of PM.
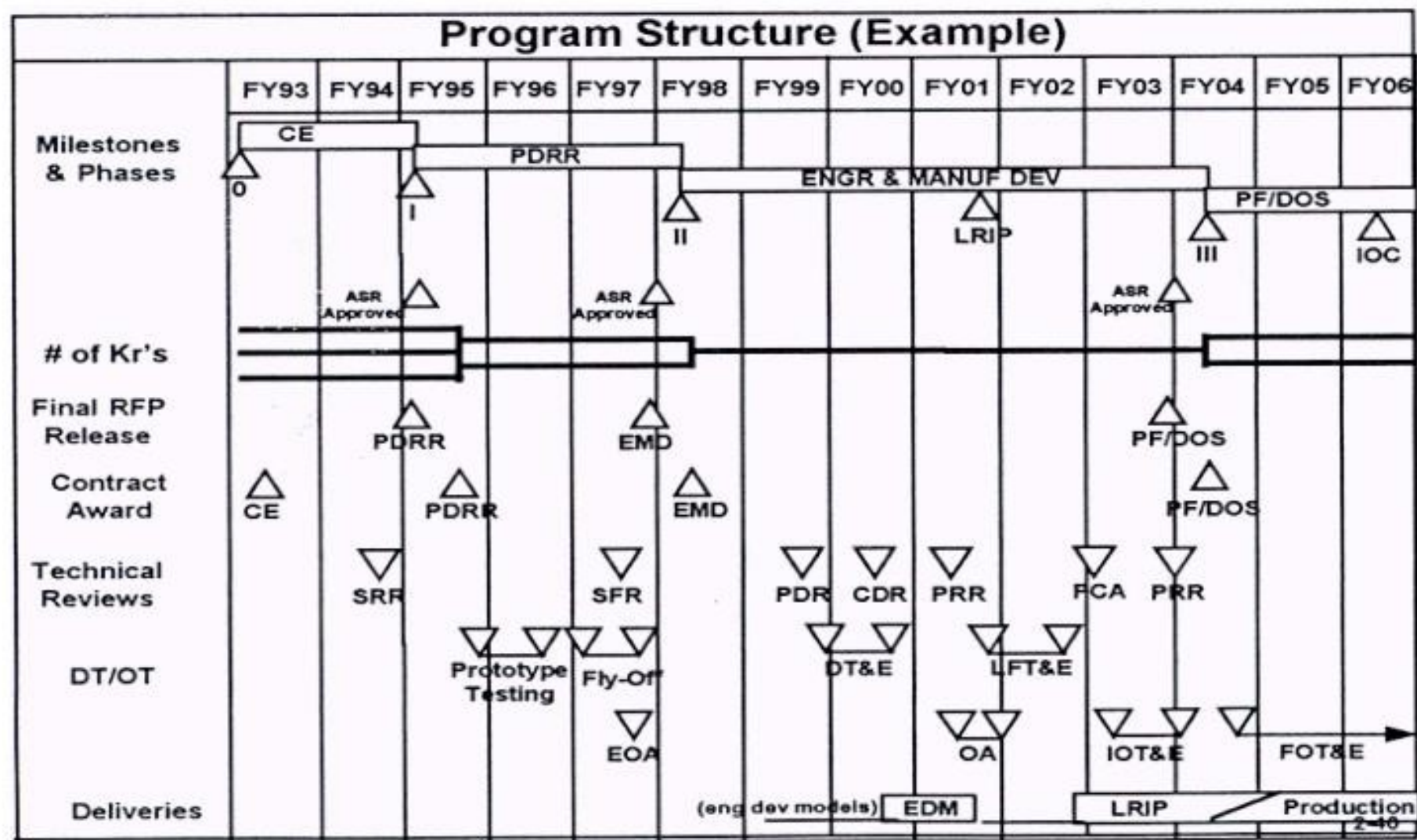
Weapon System Life Cycle

- *DAB milestones Vs phases of weapon system life*

- *Milestone 0 -> Concept Exploration*

- *Milestone I -> Program Definition and Risk Reduction (Dem/Val)*

- *Milestone II -> EMD*

- *Milestone III -> Production, Deployment & Operational Support*

Modification programs can start anywhere.

Typical Program Structure

Program Structure (Example)

Acquisition Organization

- *HQ USAF role: policy and budgeting*
- *AFMC: implementing command*
  - *Research, development, test, production and support through:*
    - *product centers, test centers, labs and ALCs*
- *IWSM and IPD: "cradle-to-grave" product focused approach*
- *Using Commands: the customers*
  - *define the requirements and budget*

HQ USAF and Acquisition

- *Policy writers and Direction givers*
  - *DoDD, FAR, etc.*
- *Driven by the budget process*
  - *PEM fights for $*
- *Manned by Users/Operators*
  - *more operational than acquisition experts*
- *Politics*
  - *It is hard to see a logical flow from national strategy to program direction and priorities*

Politics: war by other means.

AFMC

- *Responsible for research, development, test, production and support*
  - *Laboratories (e.g. AFRL)*
  - *Product Centers (i.e.. ESC, ASC, SMC)*
  - *Test Centers (e.g. Edwards)*
  - *Logistics Centers (e.g. WR-ALC)*
- *Implementing Command for new programs*
  - *Translates user requirements into engineering/ contract language and manages contracts until operational*

Dominated by people with little or no operational or industry experience.

Integrated Program Teams

- **Their role is to manage program execution**
  - *Manage and control the risks*
- **Multi-disciplinary group led by program manager***
  - *Engineering*
  - *Financial management*
  - *Safety*
  - *Configuration/Data management*
  - *Manufacturing*
  - *Quality assurance*
  - *Contracting*
  - *Test and evaluation*
  - *Acquisition logistics**

* Only people likely to have operational experience.

Role of Industry

- *Contractors are the producers of products*
  - *Complex systems require heavy investment in capital, engineers and skilled craftsmen*
  - *Most primes are really systems integrators and assemblers*
    - *Large primes rely on thousands of suppliers for parts*
  - *Government only produces paper*
    - *Most Government workers have never worked for prime contractors*

Incentives are tied to the contracts; therefore, the biggest challenge is to write an unambiguous contract that makes it most profitable to do what the customer really wants the contractor to do

The Challenge

- *Since most contractor people have no Government acquisition experience and most Government people have no industry experience, communication can be frustrating or infuriating, and can lead to anger, mistrust and litigation.*
  - *Contractors may actually do something extra-contractual because a Government person tells him to (this is especially bad if that person has no authority to give the contractor direction).*
  - *Some blue suit folks don't understand that "go fast, go far, carry many bombs, kill many people" is not clear engineering or contractual language*

Recent Changes in Environment

- *Downsizing's impact on role of Government*
  - *Insight Vs oversight*
- *Acquisition Streamlining*
  - *COTS, Lightning Bolts*
  - *Fixed Price vs Cost Plus contracting pendulum*
- *Industry Consolidation's impact*
  - *lower overall overhead*
  - *less competition*
- *Pace of commercial technology*

Downsizing the Acquisition Corps

- **30-40% decrease masks the real loss in expertise**
  - *Early-outs and retirements decreased average experience level*
    - *No substitute for experience in this complex field*
    - *Led to reverse empowerment*
      - *slows the process*
    - *Result: one deep in most disciplines*
  - *Few new hires since 1984 means the real crunch is yet to come*
    - *50% of current force retirement eligible in 5 years*
  - *Operational experience almost non-existent in IPTs*
  - *Result: Greater reliance on support contractors*
    - *Another set of problems when "best value" = lowest price*

Downsizing the Acquisition Corps

- *Smaller SPOs improves internal communication*
  - *Things could go faster if it weren't for the lack of experience*
- *More centralization (SAF/AQ) means longer queues*
  - *Things can't go faster because of "Mother, may I?"*

Downsizing the Acquisition Corps

- ***How is DoD/USAF dealing with downsizing***
  - *DAWIA is meant to ensure acquisition corps members have appropriate*
    - *training*
    - *education*
    - *experience*
  - *Lightning Bolt #3: SPO "Slim Fast"*
    - *Do more with less*
      - *Only works if everyone is fully qualified (no trainees)*
  - *Standing Senior level ASP*

It would be difficult to prove the current situation is an improvement.

Acquisition Streamlining

- **Shift to FFP development "COTS" contracts**
  - *Buy-ins add risk that you forgot something*
    - *lead to REAs and lawsuits*
  - *You get what you put on contract*
    - *"contractor format" might mean "back of the envelop"*
    - *Did you buy the data and training?*
    - *Did you buy the floor mats and seat cushions?*
    - *Did you buy support?*

Just because Contractor A built a good airplane and Contractor B built a good engine, does not mean integration is risk or dollar free. Systems engineering is a requirement.

Acquisition Initiatives

- *Cost as an Independent Variable (CAIV)*
- *Earned Value Management (EVM)*
- *Lean Aircraft Initiative (LAI)*
- *Increase Training (training weeks and virtual classroom)*
- *Process Action Teams*
- *Single Process Initiative*
- *DoD Deskbook*
- *Others, but nothing worked*

Lightning Bolts '99

99-1 Acquisition Support Teams:

- implement performance based concepts into all pre-award activities

99-2 Superior Source Selections:

- disseminate lessons learned and new policies

99-3 Market Analysis and Pricing Centers

99-4 Alternate Dispute Resolution

99-5 Contracting Support to the AEFs

99-6 Improved Payment Process

99-7 Product Support Partnerships

Industry Consolidation

- *E Pluribus Unum* *is not quite true, but we are down to two major systems contractors (Boeing and Lockheed Martin) and a handful of semi-major players (e.g. Raytheon, General Dynamics, Northrop Grumman, etc.)*

- *Consolidation has also meant emergence of foreign companies as major players*

It has yet to be demonstrated that this will truly lead to lower cost weapons systems. It will reduce the innovations.

Commercial Development Cycle Time

- *Computer hardware cycle time ~ 18 months*

- *Automobile development time ~ 24-36 months*

- *Fighter aircraft development time ~ 15 years*

Every time the system spends a year doing a DAB/source selection, it adds obsolescence to the weapon.

Acquisition Overview Summary

- *Acquisition covers wide range of activities*
- *Involves many players with differing expertise*
- *Acquisition life cycle/milestones tailored*
- *Oversight level dependent on program category*
- *Guidance Documents*
  - *DoDDs 5000.1/8000.1   DoD 5000.2-R*
  - *FAR/DFARS   DoD Deskbook*
- *Risk controlled through:*
  - *Acquisition Strategy*
  - *Milestone Reviews*
  - *Exit Criteria*
  - *Acquisition Program Baseline*

It Depends!!

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